

New Records of Noctuidae (Lepidoptera) from the Korean Peninsula (I). Trifinae

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Abstract This list is based on the Noctuid materials of the collections of Agricultural Sciences Institute, Forestry Research Institute, Center for Insect Systematics and Kyeongsang National University, including some materials preserved in foreign museums. A total of 59 species, which belong to Noctuidae "Trifinae-group" (Acronictinae, Noctuinae, Heliethinae, Hadeninae, Cuculliinae and Amphipyridae), are recorded from Korea for the first time. Among them, twelve species already known from Japan are reported for the first time from the continental Asia. Four species (*Brithys crini*, *Apamea hampsoni*, *Kumasia kumaso* and *Callopistria japonobia*) are only known from Cheju island and six species (*Euxoa lidia*, *Spaolotis deplorata*, *Xestia (Anomogyna) albuncula*, *Lacanobia dentata*, *Apamea rubrivena* and *Pseudocosmia maculata*) only from North Korea.

Key words Systematics fauna, Lepidoptera, Noctuidae, Trifinae Korea.

INTRODUCTION

Faunistic study on the Lepidoptera of the Korean Peninsula has a long history, from the second half of the last century (Park, 1976), but till now the inventory of some groups of Lepidoptera is far from completion and the knowledge of Korean Noctuid fauna is far from satisfaction.

The gradual increase of interest on the Korean Noctuid fauna is due to "transitional" biogeographical position of the Korean Peninsula. During the last two decades many articles have been published on the Noctuid fauna of Korea (Sugi and Pak, 1970; Park and Lee, 1977; Inoue, 1979; Jun and Shin, 1980; Kishida, 1981; Sugi, 1982; Nam *et al.*, 1982; Shin, 1982, 1983, 1984, 1985, 1987, 1988, 1991; Park and Weon, 1988; Shin *et al.*, 1989, 1990; Shin and Kim, 1989; Shin and Ju, 1991; Shin and Kim, 1991; Shin and Cheong, 1992; Jaros *et al.*, 1992; Kononenko and Spitzer, 1993; Shin and Choi, 1993; Shin and Kim, 1993; Ronkay and Park, 1994; Ahn *et al.*, 1994).

This paper is a part of a series of contribution to the Korean Noctuid fauna after examining major four moth collections in South Korea. And several species were added by determining the specimens found from abroad. In this paper 59 species of so called "Trifinae-group" (Acronictinae, Heliethinae, Noctuinae, Hadeninae, Cuculliinae, Amphipyridae) are reported for the first time from Korea. Among them twelve species are firstly reported from the continental Asia as well. Four species

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(*Brithys crini*, *Apamea hampsoni*, *Kumasia kumaso* and *Callopietria japonobia*) are only known from Cheju island and six species (*Euxoa lidia*, *Spaolotis deplorata*, *Xestia (Anomogyna) albuncula*, *Lacanobia dentata*, *Apamea rubrivena* and *Pseudocosmia maculata*) only from North Korea. The following information is given for each species: photographs except several species, quotation of original description, main synonyms, data of the materials examined, general distribution and taxonomic or faunistic notes, if necessary.

The following abbreviations are used for the places of depositing collections [ASI]-Agricultural Sciences Institute, Rural Development Administration, Suwon; [CIS]-Center for Insect Systematics, Department of Agrobiological Science, Kangwon Nat. Univ., Chuncheon; [FRI]-Forestry Research Institute, Cheongryangri, Seoul and Gwangleung, Gyunggi Province; [KSNU]-Kyeongsang National Univ., Chinju; [NSM]-National Science Museum (Nat. Hist.), Tokyo, Japan. For the notes of distribution, we used abbreviation RFE which means Russian Far East region. Abbreviations for provinces as collecting sites are given as follows: SE-Seoul Area; GG-Gyunggi Prov.; GW-Gangwon Prov.; CN-Chungnam Prov.; CB-Chungbuk Prov.; JN-Jeonnang Prov., JB-Jeongbuk Prov.; GN-Gyungnam Prov.; GB-Gyungbuk Prov.; CJ-Cheju Prov.; RGO as a collector name means that specimen was captured and sent by the Rural Guidance Offices of Rural Development Administration. For the distribution range in Korea, four divisional words were used: Northern - northern part of the Korean Peninsula (upper area of DMZ, DPRK area); Central-central part of the Korean Peninsula (including GG, GW, CB and CN of ROK); Southern - southern part of the Korean Peninsula (including JB, JN, GB and GN of ROK); Cheju-Cheju province.

A LIST OF NEWLY ADDED SPECIES FROM THE KOREAN PENINSULA

Subfamily Acronictinae 저녁나방과科

Gerbathodes paupera (Staudinger) 흰무늬애저녁나방 (Plate I-1)

Craniophora paupera Staudinger, 1892, In Romanoff, Mem. Lepid. 6: 394.

Graphiphora lichenodes Graeser, 1892, Berl. Ent. Zeit. 37: 216.

Gerbatha connexa Leech, 1900, Trans. Ent. Soc. Lond. 1900: 516.

Material examined. [ASI]-1♀, Yangyang, GW, 30. V. 1987 (K. -T. Park); 1♀, Andong, GB, 7. VII. 1988 (K. -S. Lee); 1♀, Mt. Pekunsan, JN, 19. VIII. 1992 (S. -B. Ahn); [CIS]-1♀, Gwangleung, GG, 8. VII. 1992 (K. -T. Park & B. -K. Byun); 2♀, Mt. Myongjisan, GG, 28. VII. 1992 (K. -T. Park & B. -K. Byun); 1♂, 1♀, Bongmyongri near Hongcheon, GW, 30. VI, 23. VII. 1992 (K. -T. Park & B. -K. Byun); 1♀, Seomyeon, Yangyang, GW, 20. V. 1987 (K. -T. Park); 1♀, Sogumgang, GW, 8. VII. 1988 (K. -T. Park); [FRI]-Gwangleung, GG.

Distribution. Korea (Central, Southern), Japan (Hokkaido, Honshu), NE China, RFE (from the Amur basin to Primorye).

Note. The species inhabits in the mixed forests with the broad-leaved trees including oaks.

Gerbathodes angusta (Butler) 애저녁나방 (Plate I-2)

Gerbatha angusta Butler, 1879, Spec. Lepid. Het. Colln Brit. Mus. 3: 24, pl. 47: 2.

Material examined. [ASI]-1♀, Suanbo, CB, 23. VIII. 1990 (S. -H. Oh); [CIS]-1♂, 1♀, 19. V. 1990 (K. -T. Park); 1♂, Gwangleung, GG, 19. V. 1988 (K. -T. Park); 1♀, Chunchon, GW, 29. V. 1989 (K. -T. Park & B. -K. Byun); [FRI]-Gwangleung, GG; Cheongryangri, SE.

Distribution. Korea (Central), Japan (Honshu, Shikoku, Kyushu).

Note. Korean data is the first record in the continental Asia.

***Acronicta (Hyboma) jozana (Matsumura)* 회색저녁나방 (Plate I-3)**

Acronicta jozana Matsumura, 1926, Insect Mats. 2: 1, pl. 1, fig. 5.

Acronicta phaediola Draudt, 1931, In Seitz, Macrolepid. World 3, Suppl.: 8., pl. 1c.

Material examined. [ASI]-1 ♂, Hongcheon, GW, 24. V. 1989 (K. -S. Lee); 1 ♀, Chuncheon (Dongsan), GW, 16. VIII. 1991 (S. -B. Ahn).

Distribution. Korea (Central), Japan (Hokkaido, Honshu), NE. China, RFE (from Amur basin to Primorye).

***Acronicta (Hyboma) adauca Warren* 큰빛나무저녁나방 (Plate I -4)**

Acronicta strigosa adauca Warren, 1909, In Seitz, Gross-Schmett. 3: 16, pl. 3e.

Acronicta phaedra Hampson, 1910, Cat. Lep. Phal. Brit. Mus. 9: 520, pl. 147: 32.

Material examined. [ASI]-1 ♂, Yeonchon, GG, 3. V. 1985, (D. -J. Im); 1 ♀, Suwon, GG, 7. V. 1986 (M. -O. Yeom); 1 ♂, Suwon, 18. V. 1976 (Light Trap); 2 ♂, Mt. Yeogisan (Suwon), GG, 26. 28. VI. 1989 (K. -S. Lee); 3 ♂, 12, 15. VI. 1991 (S. -B. Ahn); 1 ♂, Suwon, GG, ? . ? . 1987 (S. -B. Ahn); 1 ♂, Suwon, GG, 1. VII. 1991 (S. -B. Ahn); 1 ♂, Wonju, GW, 17. VIII. 1981 (K. -R. Choe); 1 ♂, Gangwondo, GW, 27. IV. 1970 (K. -N. Park); 1 ♀, Hongcheon, GW; [CIS]-1 ♂, Mt. Myongjisan, GG, 25. V. 1990 (K. -T. Park); 1 ♀, Yangku, GW, 14. IV. 1987 (K. -T. Park); 3 ♂, Mt. Odaesan, GW, 22. V. 1980 (K. -T. Park); 1 ♂, Chuncheon, GW, 8. VI. 1988 (K. -T. Park); 1 ♀, Pyeongchang, GW, 31. VII. 1991 (K. -T. Park).

Distribution. Korea (Central), Japan (from Hokkaido, to Kyushu), E. Siberia (Ussuri).

Note. This species is already known species by Japanese literature (Hirashima, 1989) and similar to *A. strigosa* (Denis et Schiffermüller), but larger than that. Many person misidentified this species as *A. strigosa*

***Craniophora pacifica* Filipjev** 고리흰저녁나방 (Plate I-5)

Craniophora pacifica Filipjev, 1927, Ezheg. Zool. Mus. 28: 231, pl. 12: 8, 9.

Material examined. [ASI]-1 ♀, Yutenji (present correct locality uncertain), 1. VII. 1924 (H. Okamoto et T. Kurisue); 2 ♀, Gesseiji (Inchon, GG, present correct locality uncertain), 13. VII. 1923 (T. Kurisue et S. Maruta); 3 ♂, Onseiri (present correct locality uncertain), 25. VII. 1924; 2 ♂, 1 ♀, Makaen (present correct locality uncertain), 1. VIII. 1924 (H. Okamoto et T. Kurisue).

Distribution. Korea (Northern, Central), Japan (Hokkaido, Honshu), RFE (from Amur basin to Primorye).

***Bryophila orthogramma (Boursin)* 암개이끼밤나방 (Plate I-6)**

Cryphia orthogramma Boursin, 1954, Zeit. wien. Ent. Ges. 39: 81, pl. 5: 1-10.

Material examined. [ASI]-1 ♂, Mt. Surisan, GG, 14-15. VII. 1989; 1 ♀, Suwon, GG, 5. VII. 1976 (K. -T. Park); 1 ♀, Suwon, GG, 16. IX. 1976 (K. -R. Choe); 2 ♀, Suwon, GG, 30. VIII. 1976 (K. -T. Park); 1 ♀, Suwon, GG, 23. VII. 1974 (Y. -I. Lee); 1 ♂, 23. VI. 1976 (K. -Y. Choe); 1 ♀, Suwon, GG, 2. VII. 1976 (K. -T. Park); 1 ♂, Suwon, GG, 22. IV. 1976 (K. -T. Park); 2 ♀, Muju, JB, 12. VIII. 1975 (K. -T. Park); 1 ♀, Jincheon, CB, 26. VII. 1974 (Y. -I. Lee); 1 ♀, Mt. Seolaksan, GW, 14. VII. 1973 (K. -T. Park); [CIS]-1 ♂, Mt. Jeombongsan, GW, 10. VII. 1992 (K. -T. Park).

Distribution. Korea (Central), Japan (Hokkaido), RFE, S. Siberia, Ural, E. Europe.

***Cryphia mediofusca* Sugi** 줄이끼밤나방 (Plate I-7)

Cryphia mediofusca Sugi, 1959, Tinea 5: 286, pl. 39: 10.

Material examined. [CIS]-1 ♀, Mt. Seolaksan, GW, 26. VIII. 1989 (K. -T. Park).

Distribution. Korea (Central), Japan (Hokkaido, Honshu), RFE (from Amur basin to Primorye).

***Cryphia minutissima* (Draudt) 검은줄이끼밤나방** (Plate I-8)

Bryophila minutissima Draudt, 1950, Mitt. münch. ent. Ges. 40: 125, pl. 3: 5.

Material examined. [CIS]-3♂, Mt. Seolaksan, GW, 10. VIII. 1989 (K. -T. Park & B. -K. Byun); 1♂, Mt. Seolaksan, GW, 12. VIII. 1992 (K. -T. Park & C. -G. Lee); 1♂, Mt. Yaksusan, GW, 9. VIII. 1980 (K. -T. Park).

Distribution. Korea (Central), Japan (Honshu, Shikoku, Kyushu), E. China.

***Stenoloba oculata* Draudt 큰별이끼밤나방** (Plate II-1)

Stenoloba oculata Draudt, 1950, Mitt. münch. ent. Ges. 40: 132, pl. 8: 20.

Material examined. [CIS]-1♀, Seomyon, Yangyang, GW, 25. VII. 1987 (K. -T. Park).

Distribution. Korea (Central), Japan (Hokkaido, Honshu, Kyushu), E. China.

Subfamily Heliothinae 담배나방亞科

***Heliothis fervens* Butler 적갈색밤나방** (Plate II-2)

Heliothis fervens Butler, 1881, Trans. ent. Soc. Lond. 1881: 186.

Heliothis foveolatus Staudinger, 1888, Stettin. Ent. Zeit. 49: 263.

Material examined. [ASI]-1♀, Seosan, CN, 17. V. 1991 (RGO); 1♂, 1♀, Yeongduk, GN, 9. X. 1991 (RGO); 1♀, Yeongduk, GN, 1-5. IX. 1991 (RGO); 1♂, Yecheon, GB, 1-2. IX. 1991 (RGO); 2♀, Wonju, GW, 1-5. IX. 1991 (RGO); 1♂, Keochang, GN, 27. VIII. 1991 (RGO); 1♀, Yeongcheon, GB, 14. IX. 1991 (RGO); [CIS]-2♀, Chuncheon, GW, 25. VII. 1987 (K. -T. Park & C. -G. Lee).

Distribution. Korea (Central, Southern), Japan (from Hokkaido to Kyushu), W. China, RFE (Primorye territory).

***Pyrrhia hedemanni* (Staudinger) 북방그늘밤나방**

Chariclea hedemanni Staudinger, 1892, In Ronanoff, Mem. Lep. 6: 552.

Chariclea erubescens Graeser, 1892, Berl. ent. Zeit. 37: 229.

Pyrrhia abrasa Draudt, 1950, Mit. münch. ent. Ges. 40: 123, pl. 8: 9.

Material examined. [FRI]-2♂, Cheongju, CB, 1. VI. 1988 (G. -J. Weon).

Distribution. Korea (Central), NE. China, RFE (from Amur basin to Primorye).

Note. The species is distributed in the steppe-like biotopes.

***Adisura atkinsoni* Moore 노랑밤나방** (Plate II-3)

Adisura atkinsoni Moore, 1881, Proc. zool. Soc. Lond. 1881: 368, pl. 37: 6.

Material examined. [ASI]-2♀, Mt. Pekunsan near Gwangyang, JN, 19-21. VIII. 1991 (S. -B. Ahn); 2♂, 3♀, Seoguiipo, CJ, 23. VIII., 15, 20. IX. 1976 (H. -S. Kim).

Distribution. Korea (Southern, Cheju), Japan (Honshu, Shikoku, Kyushu), China, Far East.

Subfamily Noctuinae 밤나방亞科

***Euxoa lidia* (Stoll) 큰점박이밤나방** (Plate II-4)

Phalaena Noctua lidia Stoll, 1782, In Cramer, Uitlandische Kapellen 4: 222, pl. 396, fig. D.

Agrotis adumbrata Eversman, 1842, Bull. Soc. imp. Nat. Mosc. 15: 543.

Agrotis melamia Nagano, 1918, Insect World 22: 490, pl. 12: 8.

Agrotis lidia f. *inexpectata* Alpheraky, 1897, In Romanoff, Mem. Lepid. 9: 158, pl. 11: 8.

Material examined. [ASI]-1 ♂, 1 ♀, Sharei (= Sariwon), N. Korea, 9, 18. VII. 1923 (Y. Hasegawa & T. Kanbe).

Distribution. Korea (Northern), Japan (Hokkaido, Honshu), Far East (from Amur basin to Primorye), southern Siberia, Mongolia, N. and C. Europe, N. America.

Note. This species lives in the holarctic steppe and partly boreo-mountainous.

***Spaelotis deplorata* (Staudinger) 바이칼밤나방**

Agrotis deplorata Staudinger, 1896, Deut. ent. Zeit., Iris, 9: 241.

Agrotis spania Püngeler, 1906, Ent. Zeit. Iris, 19: 84, pl. 6, fig. 9.

Material examined. [HNHM]-1 ♂, Mts. Pektusan, Samjian (= Samjiyon), 1700m, Prov. Ranggang, VII. 1990 (Che Hae Koom).

Distribution. Korea (Northern), Central and Western Mongolia, Baikal area.

Note. The information on finding this species and its distribution was kindly offered by Dr. Ronkay, L. (personal comm., 1994). The subspecies *S. d. persica* Staudinger, 1897 is distributed from Afgahn and Tajik Pamir to Karakorum. The subspecies *S. d. depuncta* Staudinger, 1896 occurs in the Tiensan from the Issyk-Kul area to Chinese Turkestan. The Korean specimen looks like typical Mongolian nomivative subspecies.

***Xestia (Anomogyna) albuncula* (Eversmann) 북방높은산밤나방**

Cymatophora albuncula Eversmann, 1852, Bull. Soc. Nat. Imp. Mosc. 24: 627.

Agrotis (Platagrotis) vega Herz, 1903, Ann. Mus. Zool. Acad. Imp. Sci. St.-Petersb. 8: 77.

Material examined. [NSM]-1 ♂, N. Korea, Mt. Pektusan before Samjiyon hotel, lake shore, 19. VII. 1977 (Dely & Draskovits).

Distribution. Korea (Northern), Japan (Hokkaido, Mts. Daisetsu and Central Mountains of Honshu), NE. China, Far East (Amur basin, Sikhote-Alin Mts., N. Sakhalin), from Altai and Sajon to Chukchi peninsula, Alaska and Yukon.

Note. This boreo-mountainous Siberian-nearctic species is widely distributed in the taiga and the tundra zone on the mountain systems. Korean data is the southernmost limit of its distribution in the continental Asia.

***Cerastis leucographa* (Denis et Schiffermüller) 활무늬밤나방 (Plate II-5)**

Noctua leucographa Denis et Schiffermüller, 1775, Ankund. syst. Werkes Schmett. Wien.: 83.

Material examined. [CIS]-1 ♀, Chuncheondam, GW, 12. IV. 1993 (K. -T. Park).

Distribution. Korea (Central), Japan (Hokkaido, Honshu), RFE (from Amur basin to Primorye), Siberia, Europe.

Note. Transpalearctic species, widely distributed in the forest zone and the south taiga.

Subfamily Hadeninae 줄무늬밤나방亞科

***Polia mortua* (Staudinger) 히말라야밤나방 (Plate II-6)**

Mamestra mortua Staudinger, 1888, Stett. ent. Zeit. 49: 249.

Mamestra nigerrima Warren, 1888, Proc. Zool. Soc. Lond. 1888: 302.

Mamestra afra Graeser, [1889], Berl. Ent. Zeit. 32: 326.

Hadenna kala Swinhoe, 1900, Cat. east. and Aust. Lepid. Retet. Colln. Oxford Univ. Mus. 2: 17.

Polia minorita Bryk, 1948, Ark. zool. 41(A): 1: 73, pl. 4: 4.

Material examined. [CIS]-1♂, 1♀, Mt. Gyeongsan, GW, 24. VIII. 1989 (K. -T. Park); 1♂, Mt. Dosolsan, GW, 13. VIII. 1985 (K. -T. Park).

Distribution. Korea (Central), Japan (Honshu), China, RFE (from Amur basin to Primorye and Sakhalin), Thailand, N. India, Pakistan, Nepal, Tibet.

Note. The species was recently reported from Korea (Park et al., 1993), but that report was based on misidentification. The materials reported were identical as *Apamea aquila oriens* Warren.

***Lacanobia dentata* Kononenko 가시무늬밤나방 (Plate II-7)**

Lacanobia dentata Kononenko, 1981, Proc. zool. Inst. Leiningr. 81: 95, figs. 6, 8.

Material examined. [ASI]-1♀, Sharei (=Sariwon), N. Korea, 18. VII. 1922 (Y. Hasegawa & T. Kanbe).

Distribution. Korea (Northern), SW Primorye (RFE).

***Sideridis incommoda* (Staudinger) 연해주보라밤나방**

Mamestra incommoda Staudinger, 1888, Stettin. ent. Zeit 49: 250.

Mamestra lacrimosa Graeser, [1889] 1888, Berl. ent. Zeit. 32: 328.

Material examined. [CIS]-1♂, Mt. Odaesan, GW, 6. VIII. 1986 (K. -J. Woen).

Distribution. Korea (Central), Japan [on the slope of Mt. Fujisan (S. Sugi, 1994, pers. comm.)], RFE (from Amur basin to Primorye).

Note. The species inhabits in the xeric biotopes.

***Hadena compta* (Denis et Schiffermüller) 흰띠밤나방 (Plate II-8)**

Noctua compta Denis et Schiffermüller, 1775, Ankund. syst. Werk. Schimett. Wien.: 70.

Material examined. [CIS]-1♂, Hoenggye near Daegwanryong, GW, 15. VII. 1984 (K. -T. Park).

Distribution. Korea (Central), Japan (Hokkaido, Honshu), China, S. Siberia, Far East, RFE (from Amur basin to Primorye, Sakhalin and S. Kuril isls), Europe.

Note. This is a widely distributed trans-palaearctic species, known from the steppe and the southern boundary of forest zones.

***Brithys crini* (Fabricius) 문주란밤나방 (Plate III-1)**

Bombyx crini Fabricius, 1775, Syst. Ent.: 587.

Noctua pancratii Cyrillo, 1787, Ent. Neapolit. pl. 12: 4.

Brithys crini japonica Matsumura, 1931. 6000 Illust. Insect Japan Empire: 769.

Material examined. [ASI]-1♂, 4♀, Cheju, CJ, 5-18. VIII. 1988; 1♂, 1♀, Cheju, CJ, 7, 12. IX. 1988 (S. -B. Ahn).

Distribution. Korea (Cheju), Japan (Honshu, Kyushu, Shikoku), SE Asia, India, Mediterranean region, S. Africa.

Note. This species lives on *Crinum asiaticum* var. *japonicum* Bak. distributed only in Cheju island and sometimes outbreaks.

***Pseudopanolis heterogyna* (Bang-Haas) 각시얼룩무늬밤나방 (Plate III-2)**

Aplecta heterogyna Bang-Haas, 1927, Horae Macrolepid. 1: 85, pl. 10: 34.

Pseudopanalis azusa: Shin and Kim, 1993 (nec. Sugi, 1970): 43 (Mt. Soyosan).

Material examined. [CIS]-1♂, Chuncheon, GW, 4. IV. 1993 (K. -T. Park).

Distribution. Korea (Central), RFE (from Amur basin to Primorye).

Note. The species is distributed in the mixed forest zone with conifers and broad-leaved trees. This species was reported by Shin and Kim (1993) as a new for Korea from Mt. Soyosan, GW under the misidentified name, *Pseudopanolis azusa* Sugi, 1970.

***Perigrapha uniformis* Draudt 연무늬선녀밤나방 (Plate III-3)**

Perigrapha uniformis Draudt, 1950, Mitt. münch. ent. Ges. 40: 43, pl. 3: 15.

Material examined. [FRI]-2♂, Gwangleung, GG, 6. IV. 1985 (G. -J. Won).

Distribution. Korea (Central), E. China.

Note. The specimen and genitalia was compared by the second author with syntype, female of *P. uniformis* Draudt. It slightly differs from the syntype by more greyish coloration of forewings.

***Orthosia coniertota* (Filipjev) 가노람밤나방 (Plate III-4)**

Monima coniertota Filipjev, 1927, Ann. zool. Muz. Leningr. 28: 251.

Material examined. [CIS]-1♂, Seomyeon, Yangyang, GW, ? V. 1987 (K. -T. Park).

Distribution. Korea (Central), Japan (Honshu), south of the RFE (Primorye territory).

***Mythimna iodochra* (Sugi) 회황색무늬밤나방 (Plate III-5)**

Aletia iodochra Sugi, 1982, In Inoue H. et al., Moths of Japan, I: 716, II: 358, pl. 177: 2, 361: 4.

Aletia perstriata Sugi, 1982, in Inoue H. et al., Moths of Japan I: 715, II: 358, pl. 177: 1, 361: 7.

Material examined. <f. *iodochra* Sugi>: [ASI]-1♂, Muju, JB, 16-20. VIII. 1991 (RGO); [FRI]-1♂, Gwangleung, GG, 27. VII. 1987 (K. -J. Won); <f. *perstriata* Sugi>: [ASI]-2♂, Wonju, GW, 8. V. 1991 (RGO); [CIS]-2♂, 1♀, Dunnae, Hoengsung, GW, 12. V. 1992 (K. -T. Park); [KSNU]-1♂, Hamyanggun, Naejinmyon, Wonhakri, Paiwon Temple, KN, ? V. 1990.

Distribution. Korea (Central, Southern), Japan (Honshu, Fukusada).

Note. Korean data is the first report for the continental Asia. The species is represented by two seasonal forms: spring form (*perstriata*) and summer form (*iodochra*). Synonyms were recently revised by Yoshimatsu (1994).

***Mythimna striata* (Leech) 줄흰무늬밤나방 (Plate III-6)**

Leucania striata Leech, 1900, Trans. zool. Soc. Lond. 1900: 127.

Material examined. [ASI]-1♂, Goheung, GN, 1-5. VIII. 1991 (RGO); 1♀, Seoguipo, CJ, 16. VIII. 1976 (H. -S. Kim); [CIS]-1♀, Yongsil, CJ, 22. VIII. 1992 (K. -T. Park & B. -K. Byun).

Distribution. Korea (South, Cheju), Japan (from Honshu to Kyushu, Tsushima, Yakushima).

Note. Korean data is the first record for the continental Asia. The species was originally described by Leech (1900) from Japan. Later Hampson (1900) synonymized *L. striata* Leech with *L. insecuta* Walker. Sugi (1962) separated these as distinct species on the base of external appearance and genitalia character. Yoshimatsu (1987) designated lectotype of *L. striata* Leech. The specimen were fully examined with the illustration of imagoes and male genitalia (Sugi, 1962, 1982; Yoshimatsu, 1987). Formerly *L. striata* was unrecorded in the continental Asia. Its sibling species, *L. insecuta* Walker was distributed in Japan and China, and also was reported for Korea (Nam, 1982). Now it is not clear which species was treated by former author. We did not find *L. insecuta* Walker in examined collections, but in Korea quite possible. The specimen of *L. insecuta* recorded by Nam (1982) needs more detailed determination (Yoshimatsu, 1994, personal comm.).

***Mythimna loreyi* (Duponchel) 뿔흰가는줄무늬밤나방 (Plate III-7)**

Noctua loreyi Duponchel, 1827, In Godart & Duponchel, Hist. nat. Lepid. Papillons Fr. 7(1): 81,

pl. 105: 7.

Noctua caricis Treitschke, 1835, Schmett. Eur. 10(2): 91.

Material examined. [ASI]-1 ♂, Suwon, GG, 1. IX. 1982 (C. -G. Kim); 1 ex., Suwon, GG, 7. IX. 1982 (C. -G. Kim).

Distribution. Korea (Central), Japan (from Hokkaido to Kyushu, Tsushima, Yakushima), China, Indonesia, India, Asia Minor, S. Europe, N. Africa.

Sabfamily Cuculliinae 곱추밤나방亞科

***Cucullia umbratica* (Linnaeus) 높은산곱추밤나방** (Plate III-8)

Phalaena Noctua umbratica Linnaeus, 1758, Syst. Nat. (ed. 10): 515.

Cucullia sonchi Heinemann, 1859, Schmett. Deut. 1: 400.

Material examined. [CIS]-1 ♂, Chuncheondam, GW, 25. VIII. 1991 (B. -K. Byun & Y. -D. Kwon).

Distribution. Korea (Central), NE China, RFE, south Siberia, Mongolia, Europe.

***Eupsilia hidakaensis* Sugi 북해도무지개밤나방** (Plate IV-1)

Eupsilia hidakaensis Sugi, 1987, Japan Heterocerists' J. 143: 273, figs. 1, 2.

Material examined. [CIS]-1 ♂, Chuncheondam, GG, 4. IV. 1993 (K. -T. Park).

Distribution. Korea (Central), Japan (only two type specimen from Hokkaido, Hidaka).

Note. Korean data is the first report for the continental Asia.

***Agrochola evelina* (Butler) 털수염띠밤나방**

Dasyampa evelina Butler, 1879, Ann. Mag. nat. Hist (5) 4: 363.

Material examined. [FRI]-1 ♀, Cheongju, CB, 13. V. 1984 (G. -J. Weon).

Distribution. Korea (Central), Japan (from Hokkaido to Shikoku), RFE (from the Amur basin to Primorye).

Note. The species was also collected by Peregovits and Ronkay in the Mt. Pekunsan-san area (JN).

***Conistra filipjevi* Kononenko 코노넨코점밤나방**

Conistra filipjevi Kononenko, 1978, Ent. Obozr. 56(2): 891, figs. 1, 3.

Material examined. [FRI]-3 ♂, 1 ♀, Gwangleung, GG, 31. III., 10-11. IV., 10-13. V. 1984 (K. -J. Weon).

Distribution. Korea (Central), Japan (one paratype labeled as "Japan, Ashia"), RFE (S. Primorye).

Note. This species was also collected by Peregovits and Ronkay near Chuncheon.

***Xanthia ocellaris* (Denis et Schiffermüller) 흰점노랑무늬밤나방** (Plate IV-2)

Phalaena Noctua ocellaris Denis et Schiffermüller, 1775, Nat. Eur. Schmett. 1792: 647.

Material examined. [ASI]-1 ♂, Suwon, GG, ? . ? . 1975 (collector unknown).

Distribution. Korea (Central), NE China, Transbaikalia, West Siberia, Ural, Europe.

Subfamily Amphipyrinae 흰무늬밤나방亞科

***Apamea hampsoni* Sugi 구름무늬나무결밤나방**

Apamea hampsoni Sugi, 1983, Tinea 6: 10, figs. 1-4, fig. 15, 17.

Material examined. [CIS]-1 ♀, Cheju Isl., CJ, 10. VI. 1993 (K. -T. Park).

Distribution. Korea (Cheju), Japan (from Hokkaido to Kyushu, Tsushima), RFE, Kunashir, Sakhalin.
Note. This is an archipelagic species known from islands.

***Apamea brunnescens* Kononenko 연해주갈색밤나방 (Plate IV-3)**

Apamea brunnescens Kononenko, 1985, Tinea, 11, 28 : 221, figs. 1, 2.

Material examined. [CIS]-2♀, Gwangleung, GG, 10, 23. VI. 1987 (K. -J. Weon).

Distribution. Korea (Central), RFE (S. Primorye).

***Apamea rubirena* (Treitschke) 검은나무결밤나방**

Mamestra rubirena Treitschke, 1825, Schmett. Eur. 5(2): 159.

Material examined. [NSM]-1♂, Korea, prov. Ryang-gane, Chama Pas plateau, Sam-zi-yan, 1700m, 24. VII. 1975 (J. Papp & A. Voinits); 1♂, Korea, Mt. Pektusan before Sam-zi-yan hotel, lake shore, 19. VII. 1977.

Distribution. Korea (Northern), Japan (central mountains of Honshu), Far East (Magadan, Kamchatka, Sakhalin, Kuril isls of RFE), Siberia, N. America.

Note. Boreo-mountainous Holarctic species. In Korea this species is distributed in the mountains of northern part (Mt. Pektusan). Korean data is the southernmost locality of this species in the continental Asia.

***Anapamea apameoides* (Draudt) 암색주황얼룩밤나방 (Plate IV-4)**

Oligia apameoides Draudt, 1950, Mitt. münch. ent. Ges 40: 99, pl. 7: 3.

Material examined. [KSNU]-1♀, Geoje (Mt. Nojasan), GN, 18-20, VII. 1990 (N. -K. Park).

Distribution. Korea (Southern), Japan (Honshu, Shikoku, Kyushu, Tsushima), SE China.

***Anapamea minor* (Sugi) 꼬마주황얼룩밤나방 (Plate IV-5)**

Apamea minor Sugi, 1963, Tinea 6: 14, pl. 4: 13, 14.

Material examined. [CIS]-1♀, Gwangleung, GG, 8. VII. 1992 (K. -T. Park, B. -K. Byun).

Distribution. Korea (Central), Japan (from Hokkaido to Kyushu, Tsushima), RFE (S. Primorye).

Note. The species is distributed in the grasslands of RFE (S. Primorye).

***Oligia fodinae* (Oberthür) 사각무늬밤나방 (Plate IV-6)**

Miana fodinae Oberthür, 1880, Etud. d'Ent. 5: 73, pl. 3 : 12.

Gerbatha subfasciata Butler, 1881, Trans. ent. Soc. Lond. 1881: 193.

Miana elbergi Viidalepp, 1977, Faun. zmetki. Tartu State Univ.: 391.

Material examined. [CIS]-1♂, Gwangleung, GG, 10. VII. 1990 (K. -T. Park); 2♂, 2♀, Mt. Jumbongsan, GW, 10. VIII. 1992 (K. -T. Park); 1♂, Yangpyong, GW, 1. VIII. 1991 (K. -T. Park); 1♂, Sogumgang, GW, 6. VII. 1988 (K. -T. Park).

Distribution. Korea (Central), Japan (from Hokkaido to Kyushu, Tsushima), RFE (from Amur basin to Primorye, Sakhalin and Kunashir Isl.).

***Oligia leuconephra* Hampson 꼬마흰점무늬밤나방**

Oligia leuconephra Hampson, 1808, Cat. Lepid. Phal. Br. Mus. 7: 389, pl. 118: 2.

Oligia fasciuncula albiluna Kozantchikov, 1929, Ezheg. gosud. Mus. N. M. Martyanova 6: 76.

Material examined. [CIS]-1♀, Chuncheon, GW, 26. VIII. 1992 (K. -T. Park).

Distribution. Korea (Central), Japan (Hokkaido, Honshu), RFE (from Amur basin to Primorye),

S. Siberia, N. Mongolia.

Note. The systematic position of this species is unclear. It was placed to *Oligia* by Hampson and to "*Lithacodia*" by Ronkay.

***Archanara aerata* (Butler) 부들속밤나방 (Plate IV-7)**

Leucania aerata Butler, 1878, Ann. Mag. nat. Hist. (5)1: 80.

Material examined. [ASI]-2♂, Suwon, GG, 28. V., 23. VI. 1976 (K. -R. Choe); 2♂, Suwon, GG, 5, 6. VII. 1976 (J. -C. Paik, H. -S. Kang); 1♂, Gimje, JB, 15-20. VII. 1991 (RGO).

Distribution. Korea (Central, Southern), Japan (Hokkaido, Honshu), China, RFE (Primorye).

Note. The species inhabits in the wetland biotopes.

***Archanara neurica* (Hübner) 물풀속밤나방 (Plate IV-8)**

Noctua neurica Hübner, [1808], Samm. Eur. Schmett. 4: pl. 82, fig. 381.

Nonagria edelsteni Tutt, 1908, Ent. Rec. Journ Var. 20: 166.

Material examined. [ASI]-1♂, Suwon, GG, 28. VI. 1976 (K. -R. Choe).

Distribution. Korea (Central), China, Middle East, Central and South Europe.

Note. This species is distributed in the wetlands.

***Coenobia orientalis* Sugi 점줄물가밤나방 (Plate V-1)**

Coenobia orientalis Sugi, 1982, In Inoue H. et al., Moths of Japan. I: 751, II: 366, pl. 185: 14, pl. 366: 7.

Material examined. [ASI]-1♀, Mt. Naejangsan, JB, 19. VII. 1981 (S. -G. Lee).

Distribution. Korea (Southern), Japan (Hokkaido, Honshu).

Note. Korean data is the first record for the continental Asia.

***Ctenostola sparganoides* (Bang-Haas) 빛수염물가밤나방 (Plate V-2)**

Archanara sparganoides Bang-Haas, 1927, Horae macrolepid. 1: 87, pl. 10: 38.

Material examined. [ASI]-1♂, Jeongyeup, JB, 16-20. IX. 1991 (RGO).

Distribution. Korea (Southern), Japan (Hokkaido, Honshu, Kyushu), RFE (Southern Primorye).

Note. The species is known from the wetland biotopes.

***Acrapex azumai* Sugi 애밤나방 (Plate V-3)**

Acrapex azumai Sugi, 1970, Tinea 8, 2 : 221, pl.70: 16, pl. 71: 31.

Material examined. [ASI]-1♂, Mt. Pekunsan, Gwangyang, JN, 25. VI. 1991 (S. -B. Ahn).

Distribution. Korea (Southern), Japan (Shikoku, Kyushu, Tsushima, Miyako, Ishigaki, Iriomoto, Yakushima, Okinawa).

Note. The record from Korea is the first report for the continental Asia.

***Kumasia kumaso* (Sugi) 민머리큰밤나방 (Plate V-4)**

Apamea kumaso Sugi, 1958, Tinea 6: 13, pl. 4: 8.

Material examined. [ASI]-4♂, Seoguipo, CJ, 30. VI., 8. VII. 1976 (H. -S. Kim).

Distribution. Korea (Cheju), Japan (Honshu, Shikoku, Kyushu).

Note. Korean data is the first record for the continental Asia.

***Triphaenopsis jezoensis* Sugi 애흰점뒷노랑밤나방 (Plate V-5)**

Triphaenopsis jezoensis Sugi, 1962, Tyo Ga 13: 44, figs 3-5.

Material examined. [ASI]-1 ♂, Muju, JB, 26-28. IX. 1991 (RGO); [CIS]-1 ♂, Hangyeryong, GW, 18. VIII. 1992 (K. -T. Park, B. -K. Byun); 2 ♂, Mt. Gyeongbongsan, GW, 2. VIII. 1989 (K. -T. Park).
Distribution. Korea (Central, Southern), Japan (from Hokkaido to Kyushu), S. Sakhalin (RFE).
Note. Korean data is the first report for the continental Asia.

***Polypaenis subviridis* (Butler) 회록색밤나방** (Plate V-6)

Plataplecta subviridis Butler, 1878, Ann. nat. Hist. (5) 1: 195.

Material examined. [ASI]-1 ♀, Suwon, GG, 19. VII. 1972 (K. -T. Park); 1 ♂, Yeongdong, CB, 5-10. VII. 1991 (RGO); 2 ♀, Seogwipo, CJ, mid. VI. 1985 (K. -S. Lee); [CIS]-2 ♂, 1 ♀, Bongmyongri, GW, 30. VI. 1992 (K. -T. Park, B. -K. Byun); 2 ♂, 1 ♀, Cheju Isl., CJ, 10. VI. 1993 (K. -T. Park); [FRI]-Gwanglung, GG; Whayangdong, CB.

Distribution. Korea (Central, Cheju), Japan (from Hokkaido to Kyushu, Tsushima), China.

***Chandata bella* (Butler) 흑백알락밤나방** (Plate V-7)

Lamprosticta bella Butler, 1881, Trans. ent. Soc. Lond. 1881: 183.

Material examined. [CIS]-1 ♂, Hangyeryong, GW, 18. VII. 1992 (K. -T. Park); 1 ♂, Bongmyongri, GW, 31. VII. 1992 (K. -T. Park).

Distribution. Korea (Central), Japan (from Hokkaido to Kyushu), Taiwan, China, RFE (from the Amur basin to Primorye, S. Sakhalin and Kunashir Isl.).

Note. This species was recorded during press of this report (Sohn, 1994).

***Xenotrachea nipponica* Kishida & Yoshimoto 큰점원줄밤나방** (Plate V-8)

Xenotrachea nipponica Kishida & Yoshimoto, 1979, Tinea 10: 268, figs 1, 10.

Material examined. [CIS]-1 ♀, Mt. Yaksusan, GW, 9. VIII. 1980 (K. -T. Park).

Distribution. Korea (South), Japan (from Hokkaido to Kyushu, Tsushima), RFE (S. Primorye).

***Dypterygina cupreotincta* Sugi 끝무늬밤나방** (Plate VI-1)

Dypterygina cupreotincta Sugi, 1954, Tinea 1: 26, pl. 2: 9.

Material examined. [CIS]-1 ♀, Gwangleung, GG, 31. V. 1986 (K. -T. Park et U. Park); 1 ♀, Hongcheon, GW, 12. VI. 1992 (K. -T. Park); 1 ♂, Gwangleung, GG, 8. VII. 1992 (K. -T. Park et B. -K. Byun); 1 ♂, Sogumgang, GW, 24. V. 1988 (K. -T. Park); 1 ♂, Mt. Dodrimsan, GW, 19. V. 1990 (K. -T. Park); 1 ♀, Chuncheon, GW, 7. VII. 1990 (K. -T. Park); 1 ♀, Chuncheondam, GW, 15. VI. 1992 (K. -T. Park); 1 ♀, Mt. Samaksan, GW, 22. VI. 1989 (K. -T. Park); 1 ♀, Mt. Myongjisan, GG, 25. V. 1990 (K. -T. Park); 2 ♀, Cheju Isl., CJ, 10. VI. 1993 (K. -T. Park).

Distribution. Korea (Centrl, Cheju), Japan (Honshu, Shikoku, Kyushu, Tsushima).

Note. The Korean data is the first record for the continental Asia.

***Spodoptera apertura* (Walker) 작은멋쟁이밤나방** (Plate VI-2)

Prodenia apertura Walker, 1856, List Spec. lepid. Ins. Colln Br. Mus., 32: 654.

Material examined. [FRI]-1 ♂, Gwangleung, GG, 7. IX. 1992 (G. -J. Weon).

Distribution. Korea (Cental), China, Indonesia, Borneo.

Note. The species is distributed in the Old World tropical region. In Asia it was reported from Borneo and Indonesia by Holloway (1989), and from S. China by Chen (1982). Korean data is the northernmost record and this seems to be a migrating species. The imagoes and male genitalia was illustrated by Holloway (1989).

***Platyperigea montana* (Bremer) 북방담색밤나방**

Caradrina montana Bremer, 1861, Bull. Acad. Imp. Sci. St. Petersburg. 3: 485.

Material examined. [FRI]-2♂, Mt. Odaesan, GW, 7, 10. IX. 1988 (K. -J. Won).

Distribution. Korea (Central), E. Siberia, Mongolia, RFE (from the Transbaikalia, the northernmost part to Magadan region and the southernmost part to Primorye and Sakhalin).

Note. Boreal Siberian-Nearctic species. This species was reported by Bryk (1948) as *Caradrina grisea caolifera* Bryk from Korea. Materials of Bryk's collection was redetermined by Kononenko.

***Cosmia apicimacula* Sugi 끝점박이밤나방 (Plate VI-3)**

Cosmia apicimacula Sugi, 1959, Tinea 5: 290, pl. 39, fig. 9.

Material examined. [ASI]-1♂, Mt. Odaesan, GW, 6. VIII. 1989 (K. -T. Park).

Distribution. Korea (Central), Japan (Honshu), RFE (Primorye territory).

***Pseudocosmia maculata* Kononenko 연해주점박이밤나방**

Pseudocosmia maculata Kononenko, 1985, Tinea, 11, 27: 218, fig. 3.

Material examined. [in the collection of Mr. Sugi (Japan)]-1♂, from N. Korea.

Distribution. Korea (Northern), China, RFE (S. Primorye).

Note. The species was illustrated by Chen (1982: 227, pl. 84, N. 1978), under the misidentified name, '*Chasmina biplaga* Walker'.

***Condica illecta* Walker 희미무늬밤나방 (Plate VI-4)**

Condica illecta Walker, 1865, List. Spec. lepid. Ins. Colln. Br. Mus. 32: 694.

Material examined. [ASI]-1♂, Gwangyang, JN, 25. VI. 1991 (S. -B. Ahn); 1♂, Gwangyang, JN 21. VIII. 1991 (S. -B. Ahn).

Distribution. Korea (Southern), Japan (Yakushima, Okinawa), RFE (S. Primorye), China, Taiwan, Vietnam, Malaysia, Philippines, Indonesia, Sri Lanka, India, Africa.

***Condica fuliginosa* (Leech) 검은희미무늬밤나방 (Plate VI-5)**

Caradrina fuliginosa Leech, 1900, Trans. ent. Soc. Lond. 1900: 120.

Material examined. [ASI]-1♂, Gwangyang (Mt. Pekunsan), JN, 25. VI. 1991 (S. -B. Ahn).

Distribution. Korea (Southern), Japan (Honshu, Shikoku, Kyushu, Tsushima, Yakushima).

Note. Korean data is the first report for the continental Asia.

***Iambia japonica* Sugi 흰알락밤나방 (Plate VI-6)**

Iambia japonica Sugi, 1958, Tinea 4: 191, pl. 25: 13.

Material examined. [CIS]-1♀, Chuncheon, GW, 12. VIII. 1991 (K. -T. Park); 2♀, Gwang-leung, GG, 8. VII. 1992 (K. -T. Park & B. -K. Byun); [ASI]-1♀, Mt. Cheonggye, GG, 20. VIII. 1976 (K. -T. Park); 4♂, 4♀, Chuncheon, GW, 24-25. VII. 1991 (S. -B. Ahn).

Distribution. Korea (Central), Japan (Honshu, Shikoku, Kyushu, Tsushima).

Note. Korean data is the first record for the continental Asia.

***Iambia transversa* (Moore) 작은알락밤나방 (Plate VI-7)**

Tyracoma transversa Moore, 1882, In Hewitson & Moore, Descr. new Indian lepid. Ins. Colln late Mr. Atkinson: 95, pl. 4: 5.

Iambia [sic] *sinica* Yang, 1964. Acta ent. sin. 13: 455, 459, fig. 1.

Material examined. [ASI]-1♂, Suwon, GG, 1-13. IX. 1991 (RGO); 1♀, Suwon, GG, 13. VI.

1991 (RGO); 1 ♀, Suwon, GG, 8. VI. 1976 (K. -T. Park); 1 ♀, Mt. Taehwasan, GG, 14. VII. 1981 (S. -B. Ahn); 1 ♀, Wonju, GW, 25. VIII. 1979 (C. -G. Yoo); 1 ♀, Suanbo, CB, 23. VIII. 1990 (S. -H. Oh); 2 ♂, Yeongcheon, GB, 17, 18-24. IX. 1991 (RGO); 1 ♂, Yeongcheon, GB, 17. IX. 1991 (RGO); 2 ♂, Kimje, JB, 1-10. VI., 10-20. IX. 1991 (RGO); 1 ♂, Muju, JB, 1-5. VII. 1991 (RGO); 1 ♂, Hongcheon, GW, 11-15. IX. 1991 (RGO); [CIS]-1 ♂, Chuncheon, GW, 16. V. 1990; 4 ♂, Gotan, Chuncheon, GW, 15, VIII. 1992 (K. -T. Park & B. -K. Byun); 1 ♀, Mt. Samaksan, GW, 19. VII. 1990 (S. -Y. Joo & D. -S. Park); 1 ♀, Naebiyonsan, JB, ? (K. -T. Park & B. K. -Byun).

Distribution. Korea (Central, Southern), Japan (Honshu, Shikoku), China, India.

***Calloplistria japonibia* Inoue & Sugi 붉은보라어린밤나방 (Plate VI-8)**

Calloplistria japonibia Inoue & Sugi, 1958, Check List Lepid. Japan (5): 519.

Material examined. [ASI]-1 ♀, Seogwipo, CJ, 13. X. 1976 (H. -S. Kim).

Distribution. Korea (Cheju), Japan (from Honshu to Kyushu, Tsushima).

Note. Korean data is the first report for the continental Asia.

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韓國産 밤나방科(나비目)의 未記錄種 I. Trifinae

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農業技術研究所, 林業研究院, 江原大學校 昆蟲系統分類研究센터, 慶尙大學校 生物科에 所藏된 밤나방科 標本을 同定한 結果 확인된, “Trifinae” (Acronictinae, Noctuinae, Heliothinae, Hadeninae, Cuculliinae and Amphipyri-nae)에 속하는 59種의 韓國 未記錄種을 報告한다. 이중 12種은 일본에서만 기록이 있을뿐 아시아 내륙에서는 처음 기록되는 종들이다. 또한 *Brithys crini*, *Apamea hampsoni*, *Kumasia kumaso*, *Callopistria japonobia* 등 4種은 現在까지 濟州島에서만 分布가 알려지는 종들이며, *Euxoa lidia*, *Spaolotis deplorata*, *Xestia* (*Anomog-yna*) *albuncula*, *Lacanobia dentata*, *Apamea rubrireana*, *Pseudocosmia maculata* 등 6種은 北韓地域에서만 採集된 종들이다.

검색어: 분류, 나비目, 밤나방, 未記錄種, Trifinae, 분포, 한국.

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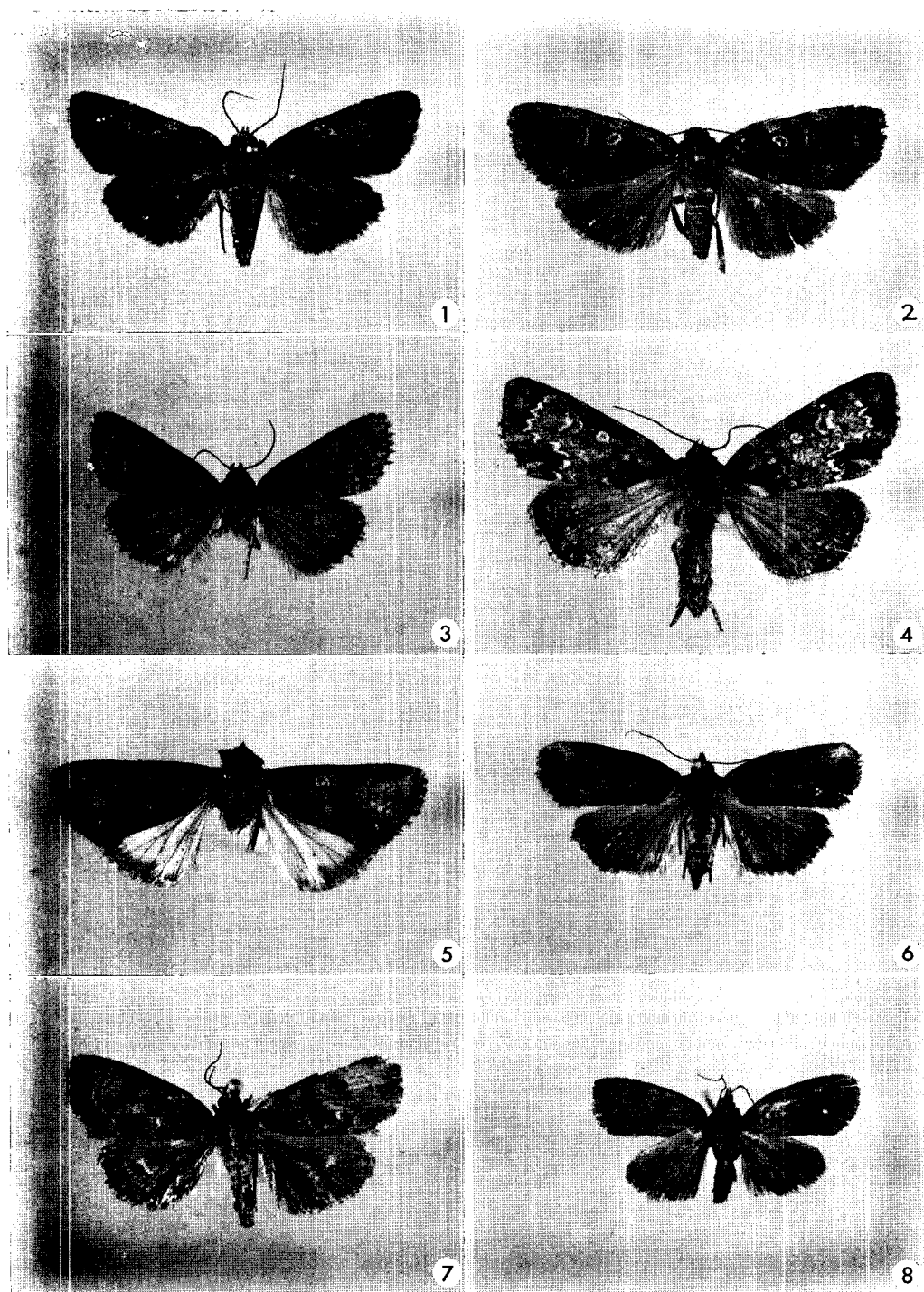


PLATE 1.

1. *Gerbathodes paupera* (Staudinger).
2. *Gerbathodes angusta* (Butler).
3. *Acronicta (Hyboma) jozana* (Matsumura)
4. *Acronicta (Hyboma) adaucta* Warren

5. *Craniophora pacifica* Filipjev
6. *Bryophila orthogramma* (Boursin)
7. *Cryphia mediofusca* Sugi
8. *Cryphia minutissima* (Draudt)

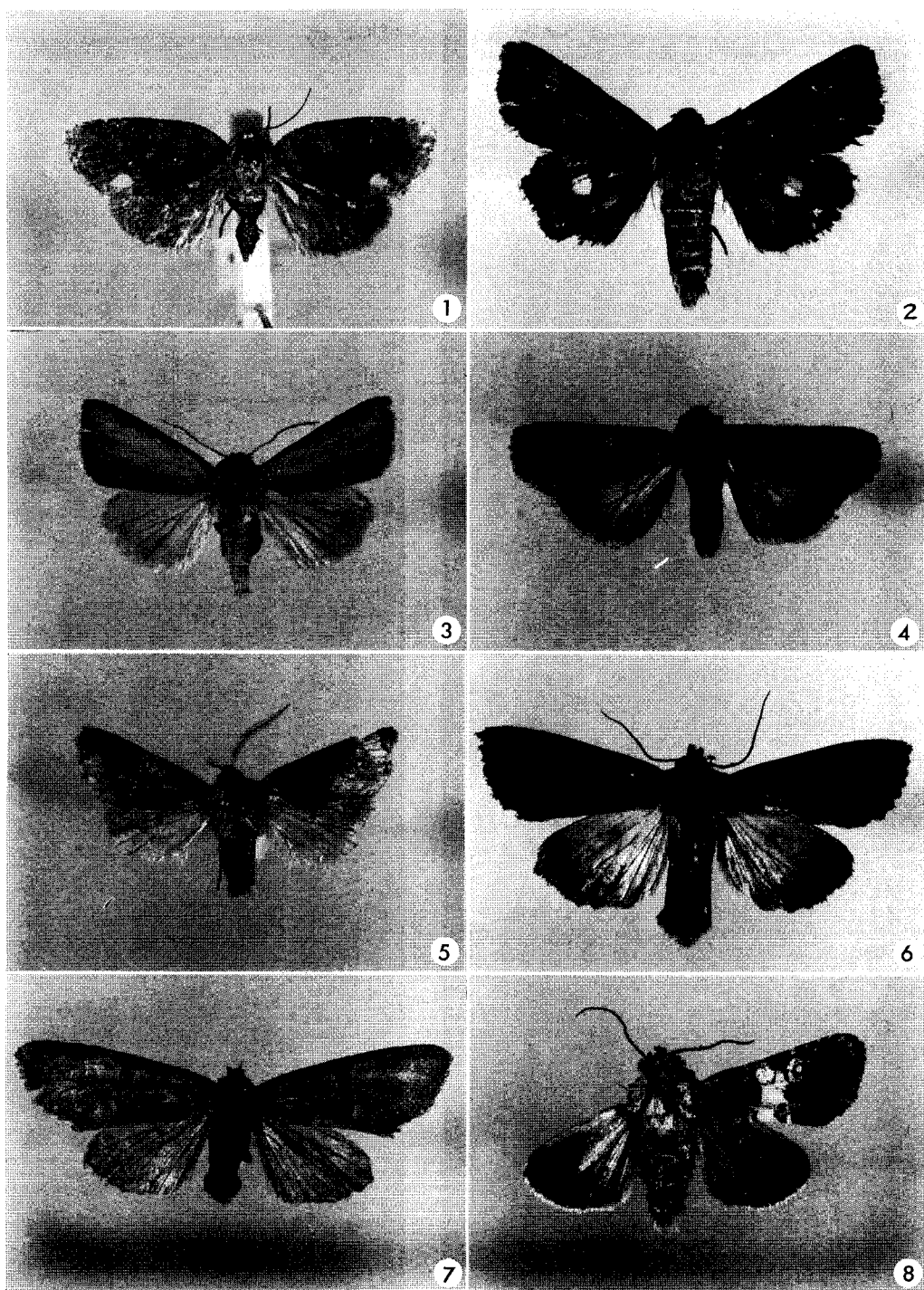


PLATE II

1. *Stenoloba oculata* Draudt
2. *Heliothis fervens* Butler
3. *Adisura atkinsoni* Moore
4. *Euxoa lidia* (Stoll)

5. *Cerastis leucographa* (Denis et Schiffermüller)
6. *Polia mortua* (Staudinger)
7. *Lacanobia dentata* Kononenko
8. *Hadenacompta* (Denis et Schiffermüller)

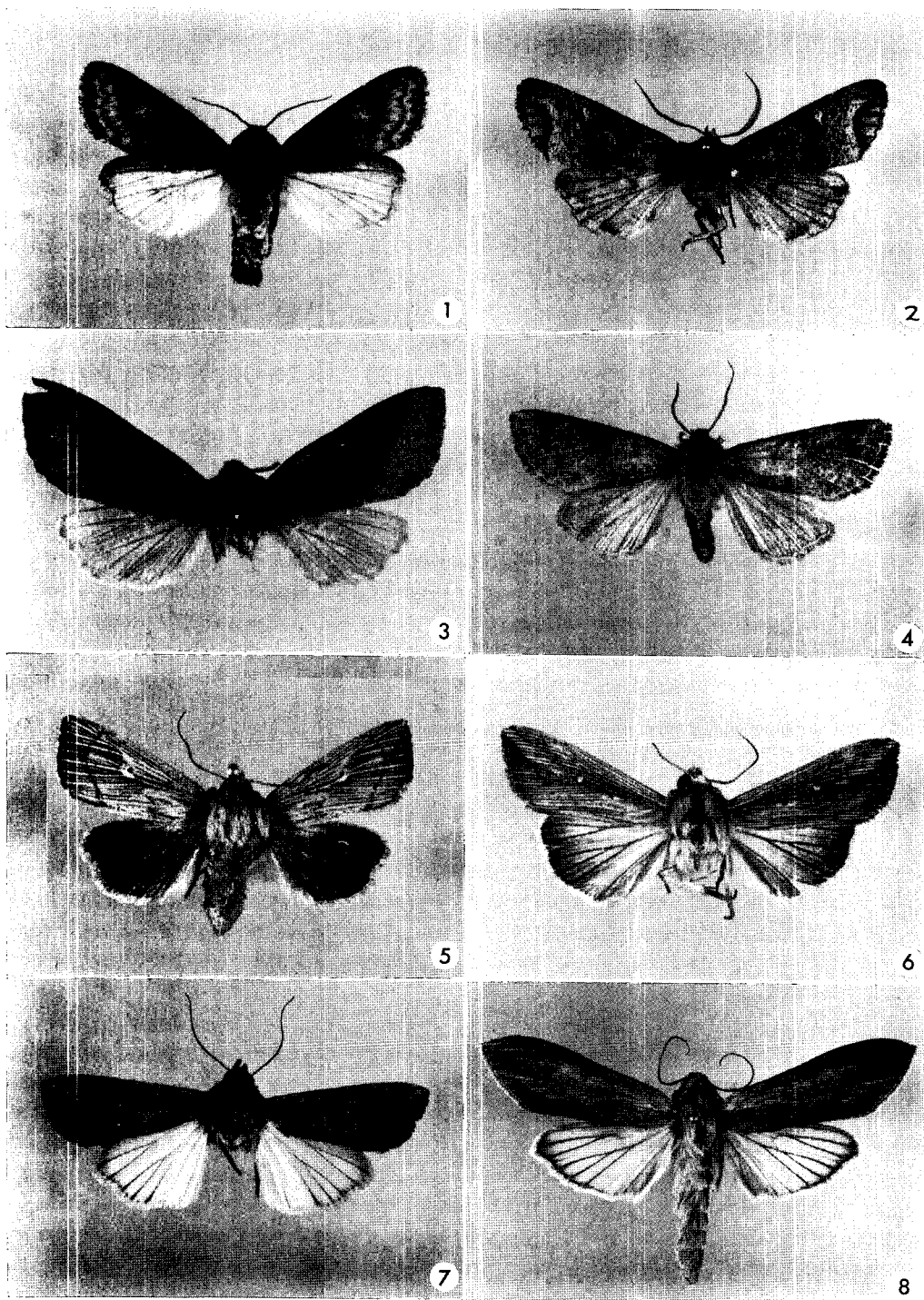


PLATE III

1. *Brithys crini* (Fabricius)
2. *Pseudopanolis heterogyna* (Bang-Haas)
3. *Perigrapha uniformis* Draudt
4. *Orthosia coniotota* (Filipjev)

5. *Mythimna iodochra* (Sugi)
6. *Mythimna striata* (Leech)
7. *Mythimna loreyi* (Duponchel)
8. *Cucullia umbratica* (Linnaeus)

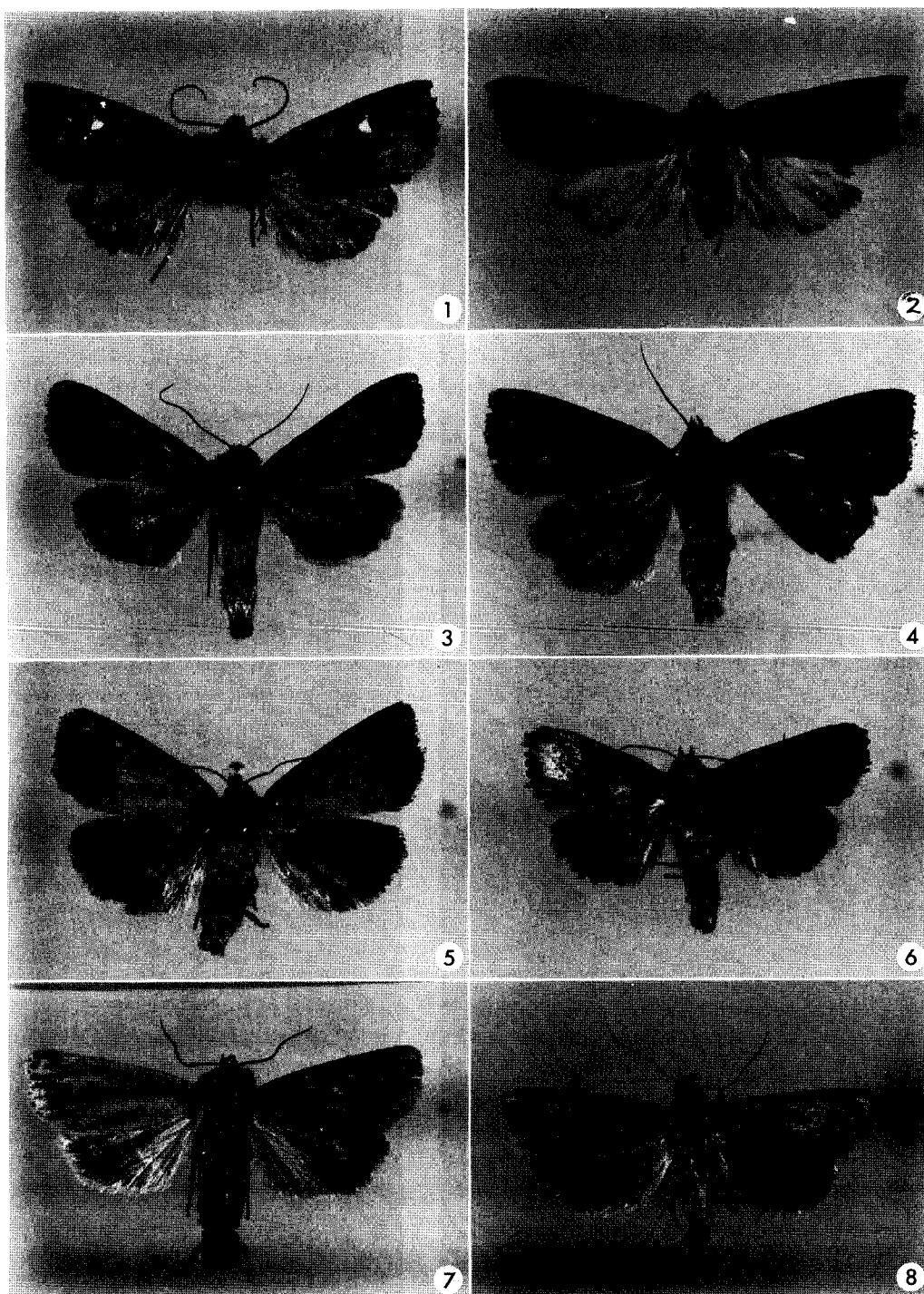


PLATE IV

1. *Eupsilia hidakaensis* Sugi
2. *Xanthia ocellaris* (Denis et Schiffermüller)
3. *Apamea brunnescens* Kononenko
4. *Anapamea apameoides* (Draudt)

5. *Anapamea minor* (Sugi)
6. *Oligia fodinae* (Oberthür)
7. *Archanara aerata* (Butler)
8. *Archanara neurica* (Hübner)

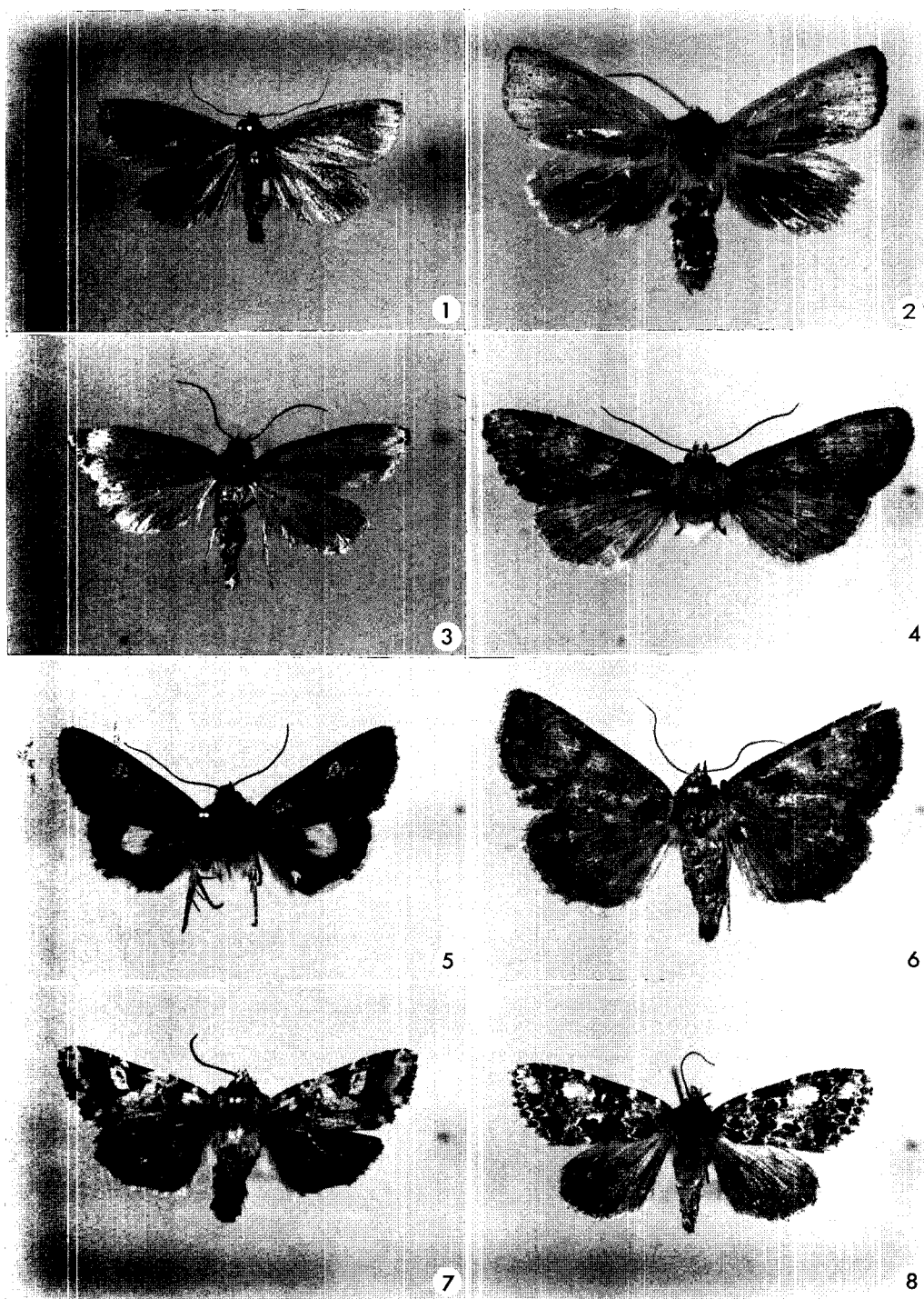


PLATE V

1. *Coenobia orientalis* Sugi
2. *Ctenostola sparganoides* (Bang-Haas)
3. *Acrapex azumai* Sugi
4. *Kumasia kumaso* (Sugi)

5. *Triphaenopsis jezoensis* Sugi
6. *Polypaenis subviridis* (Butler)
7. *Chandata bella* (Butler)
8. *Xenotrachea nipponica* Kishida & Yoshimoto

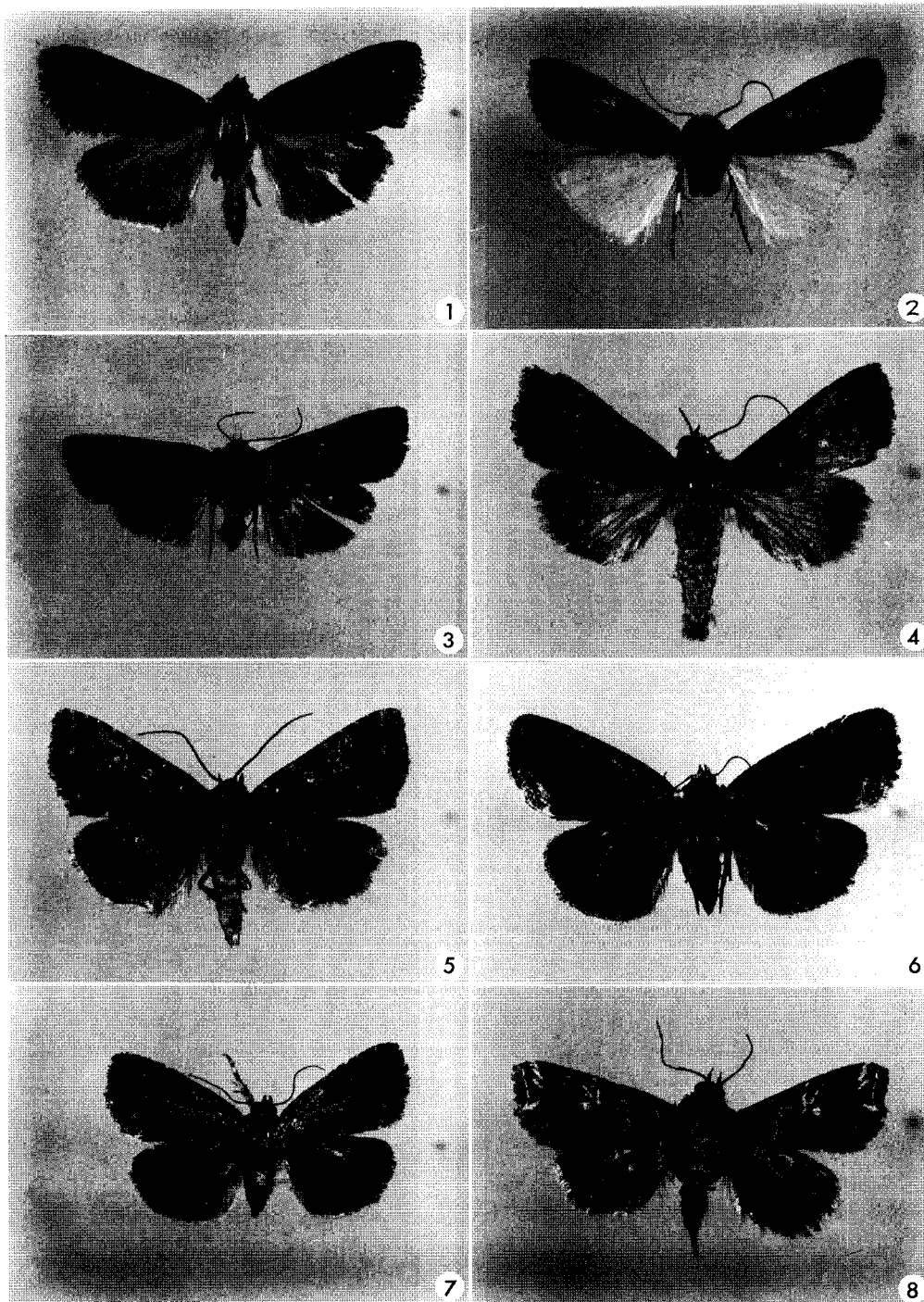


PLATE VI

1. *Dypterygina cupreotincta* Sugi
2. *Spodoptera apertura* (Walker)
3. *Cosmia apicimacula* Sugi
4. *Condica illecta* (Walker)

5. *Condica fuliginosa* (Leech)
6. *Iambia japonica* Sugi
7. *Iambia transversa* (Moore)
8. *Callopistrtia japonibia* Inoue & Sugi